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Physical

No. 47.

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Group  
Stephen Harris  
admitted March 10. 1819

Inaugural Essay

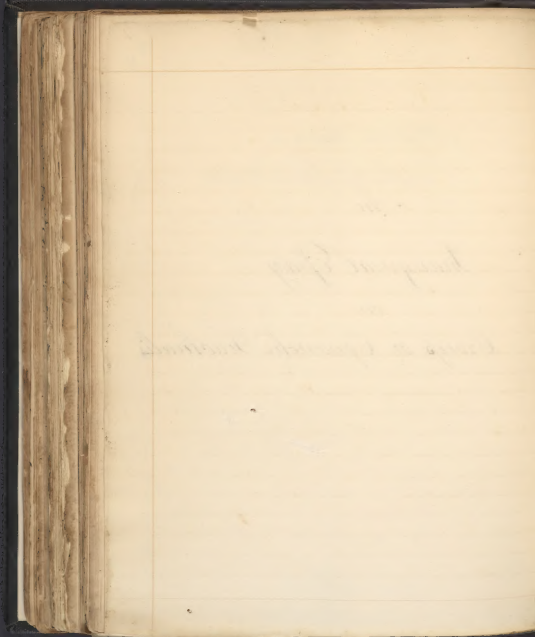
Group in Gymnasium

1977

Stephen Glass

admitted March 18, 1977

An  
Inaugural Essay  
on  
Croup or Cynanche Trachealis



## Introduction

There is no disease, with which the human system is afflicted, that has more frequently awakened the attention of modern physicians, than Croup or *Erpynuche trachealis*. That a disease, so strongly marked in its features, should have eluded particular notice, until the middle of the last Century, is a matter of no little astonishment. — Dr. Hume of Edinburgh has long had the honor, of being the first to investigate the nature of this alarming disease. — Mr. Linnæus has informed us, however, that "*Baillois est le premier qui l'aît designée d'une précise et caractéristique*." Since that period, Millar, Etmüller, Han, Michalix, Eller, Cullen, Frank, Denuin, Des Esarts, Linnæus, Albert, Rush, Scher, Cheyne, and others, have each deemed it worthy his particular deliberation; though each have thought proper, to christen it with a distinct, and favorite appellation. After having passed under the consideration of such minds, it may be considered presumption in me, to attempt <sup>shedding</sup> a glimmering ray to the east body

Introduction

The first of the three parts of the work is devoted to a general survey of the history of the subject. The second part is devoted to a detailed examination of the various theories which have been advanced to explain the origin of the subject. The third part is devoted to a critical examination of the various theories which have been advanced to explain the origin of the subject.

of light which has already fallen on this interesting subject. — In inaugural essays it cannot, indeed, be expected, that an inexperienced student, can adduce much that is either new, or interesting. — He might, it is true, strike into an untraced path, by making an excursion in the fields of fancy and speculation, but such a course, I feel convinced, would not be considered by the enlightened professors of this university, as either an evidence of judgment, solid medical acquirement, or accuracy of observation. — Under these impressions I have chosen a practical subject, and in doing so, I have selected the disease with which I am most familiar, and which has most frequently presented itself in practice to me. —

With unaffected diffidence, I submit my humble labours for examination, and can only regret that it is not more worthy the distinguished university in which I have had the honor of being educated. —





Croup, selects for its "local habitation" either the larynx, or trachea, and is generally defined, to be either a spasmodic or inflammatory affection of one of those organs.

It sometimes commences with great violence, is rapid in its progress, its symptoms short, its paroxysms rapidly succeed each other, and death soon terminates the painful sufferings of its victim, if its course be not speedily arrested, by the hand of art. — at other times, its march, is slow, its symptoms equivocal, its remissions longer, and death when it does take place, is much more tardy and insidious.

This variety in the symptoms of the disease, has been hitherto supposed to depend on some peculiarity in the state of the system, at the time of attack. — M. Bérin of Geneva, has explained it differently, however, and I think more satisfactorily. — He says that the larynx and trachea are endowed with different degrees of irritability, and hence infers, that diseased



affections of these organs, must be characterized by very opposite symptoms. - By thus attending to the external character of the disease, he was enabled to discover its precise location. I need not say, that in a practical point of view this knowledge is very interesting.

The ordinary symptoms of the Croup are a hoarse cough, a sonorous and wheezing respiration, a full and frequent pulse, a swelling and discoloration of the face, and an oppression, which appears to be the effect of a sort of compression, or contraction of the larynx. - These symptoms appear in paroxysms, and these paroxysms, increase in frequency, in duration and in intensity as the disease advances.

It commonly attacks in the night and during sleep. - It occasionally appears however, indifferently at all hours of the day.

The intervals, which occur between the first paroxysms, frequently afford a complete remission, but by degrees the remissions become less sensible and at last scarcely perceptible.

One of the most prominent characteristics of this disease, is a peculiar alteration in the sound of the voice; which has been com-



passed, by turns, to the cry of a young cock, or of an imitative hen, and to the creaking of creaking animals.

When respiration is very difficult, the pulse is hard, small, frequent, and sometimes intermittent; the heart is agitated with violence, and with irregular bounds; the carotid arteries beat with great force, the jugular veins are swelled and extended. - The face at first flushed, becomes by turns, pale, livid, and blueish; the eyes seem to project in their orbits, a cold and clammy sweat covers the head, the patient's strength is prostrated, and at one moment a frightful shivering steals over his senses, the next, he is awakened by the most painful sense of oppression.

The true cause of this extraordinary difficulty of respiration is a spasm of the larynx, produced either by inflammation of the mucous membrane of that organ, or from effusion of coagulating lymph, on its internal surface. Sometimes this lymph, either by its quantity, consistence, or by the membranous form which it assumes, forms an obstruction to the passage of air, purely mechanical. - Such cases however



are very rare, as spasm alone, is the ordinary cause of difficult respiration. — This is not a vain hypothesis, since the perfect cures, in the worst forms of the disease, prove that it cannot not so readily arise from any other cause. —

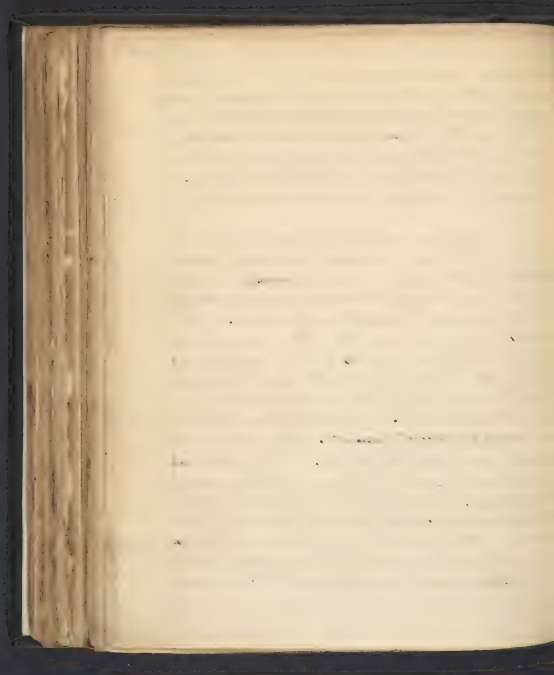
That there is a membrane formed in the trachea of croupous patients, is proved, by the most ample, and respectable testimonials. — M. Thirion of Geneva, and M. Albert of Bremen, have each in the course of a long practice, made a vast number of dissections, and in a majority of cases have found this membranaceous substance. Drs. Rush, Chapman, Archer, with many other respectable physicians of our own country, have also borne witness of its existence. — I am not prepared to explain the peculiar kind of action, which takes place in the actives of the trachea to form this extraneous body. — Much ingenious speculation, has been used in explanation of it, but none I think satisfactory. — In a practical point of view, however, it is of but little consequence, since it will afford the physician very little assistance in effecting a cure. — The duration of this disease is very variable. — If it be attacked at the commence-





ment, with suitable remedies, it commonly yields without much difficulty; but if it be abandoned to itself, or the physician be called in too late, it may either carry off the patient in a few hours, or it may be prolonged even to the tenth day. Examples of a longer duration are extremely rare.

Young children are commonly the subject of the croup, because of the great predisposition at that age, to inflammation of the larynx, and to croupy affections; complaints with which this disease is so frequently complicated. — Mr. Albert has remembered that this disease, occurs rarely in the first months of life; very frequent from the first to the seventh year; less frequent from the seventh to twelfth and very seldom beyond the last age. — Even adults are not, however, entirely exempt from it. — This author cites several examples of this kind. — The inflammation of the larynx, according to him, is nothing more than croup, modified by force of inflammation, and by a change which takes place in the condition of the organs. — Furthermore the croup of adults, however violent it may appear, is never so dangerous as in children. — To account



in which the author adduces the following reasons: the first is, that in adults the secretion of lymph is much less abundant; the second, that the irritability of the mucous is less; and the third, that the dimensions of the glands and lymph are more considerable.

The author has also observed that the crop more frequently attacks boys than girls, and hence infers, that at that period of life, the lungs and trachea are not of the same degree of development in both sexes.

Although I am not prepared to say, Mr. Roberts' speculations are correct, still I think they carry with them much plausibility, and may conduce, perhaps, to throw some light on the true character of his disease.

Temperature, season, place, age, sex, and habits of body, have all an influence in the production of scours. Cold and humidity, conduce much to the development of this disease. It occurs most frequently in autumn, in the winter, and early in the spring, and is common by rapids in low countries, surrounded by marshes, either in the vicinity of lakes, or large rivers.

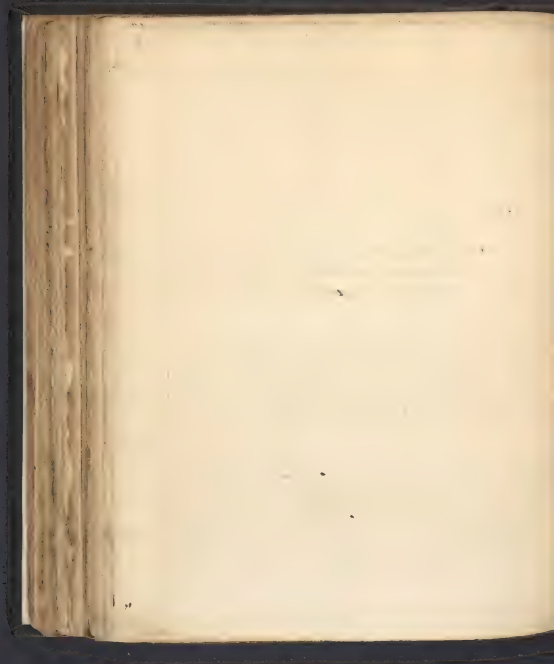


Croup is a very prevalent disease on our Atlantic coast, occasionally, no doubt by the humidity which is constantly escaping from the ocean. Mr. Albert has justly considered it to have fallen into a dog's case, when he exclusively attributed its prevalence on the sea coast, to the irritating action of the saline particles which were diffused in the surrounding atmosphere. —

All physicians admit that Chelcolum is, soon to the croup; and I have already given the opinion of the observing Albert, with regard to sex. —

There is a continued predisposition in some constitutions to croupal affections. While, however, I feel convinced of the existence of this constitutional peculiarity, Boon's, myself totally unable to throw the least light on its nature. —

To these general causes, which favour the production of croup, I will add some that are particular, such as sudden transitions from heat to cold, the injudicious custom which has for sometime existed, of clothing children too richly, and of exposing their heads and necks naked, together with damp rooms, and the



went the inspection of dressing and ventilating in  
pavilion. - The report was somewhat more than I had seen  
by the last census. -

The group is generally complicated with  
small pox, measles, scarlatina, erysipelas, and a  
few have each of these complications an influence,  
which modifies its character and progress. - Although  
it occasionally appears with the first symptoms of  
the primary disease, but it more commonly mani-  
fests itself about the period of disiccation.

When complicated with measles, it shows  
itself at an early period of the disease, and  
commonly disappears, as soon as the eruption  
takes place. - There are many instances, how-  
ever, in which group has continued through-  
out the whole period of this affliction's disease.

Dr. Robert has seen group, combined with  
the vaccine disease, though I have never heard  
of its appearing in this form in the Western  
States. -

Having now closed, my description  
of the history and character of this disease,  
I shall proceed to a more important part,  
viz. its treatment.

In the incipient stage of this disease

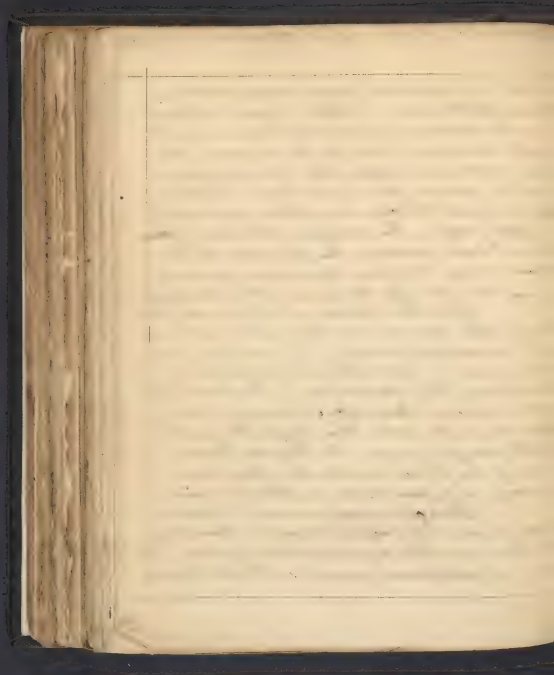




emetics are indicated; and will in most instances affect a cure. - Sulph. of zinc, tart. Emet. or a combination of Ipecac. and Calomel, are the articles ordinarily used for this purpose. - To derive proper advantage, from this remedy, it ought to operate four or five times. - "Hapfeldt" (says Dr. Rush) "children are seldom injured by a little except in the operation of this class of medicines. I have prevented the formation of this disease many hundred times and frequently in my own family, by means of this remedy."

After this disease is fully formed, Bloodletting, both general and local, is the first and most important remedy. - The quantity to be drawn must be left to the judgment and discretion of the practitioner. - Dr. Rush " drew twelve ounces of blood at one bleeding, in one day, from a son of Mr. John Garol, then in the fourth year of his age. - Dr. Physick bled a child of but three months old, three times in one day. Life was saved in both these cases."

Although many eminent Physicians prefer small, but frequent, to copious Bloodletting, yet there are others equally distinguished, who bleed ad deliquium animi. - I think, however,

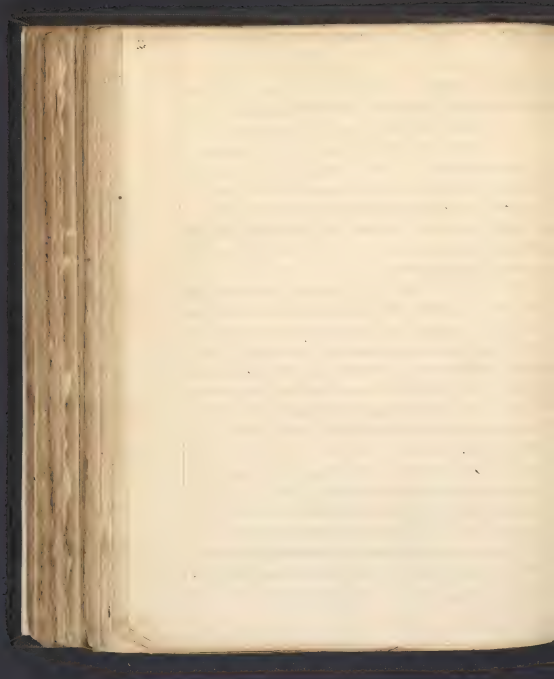


that the former practice is the safest, and so far as my limited experience has extended, I have found it very successful.

After the system has been reduced by bloodletting, it will be necessary to exhibit emetics, but at small doses, and at regular intervals. - They will have a powerful tendency to overcome spasm, as well to expel the false membrane or viscid matter from the canal of inspiration. -

If these first means are not sufficient to arrest the progress of the disease, it will be necessary to have recourse to blisters, and sinapisms. - They may be applied either to the front or back of the neck, to the breast, or to the extremities, as circumstances may indicate. They act by producing a counter irritation on the surface of the body.

The tepid bath may be used with signal advantage during the first period of this disease. - This is a favorite remedy with the present professors of the institutes and practice of medicine, and I know from my own experience that it



produces the happiest effects. - It diminishes  
irritation, relaxes the spasms, and promotes  
a determination of the fluids to the surface.

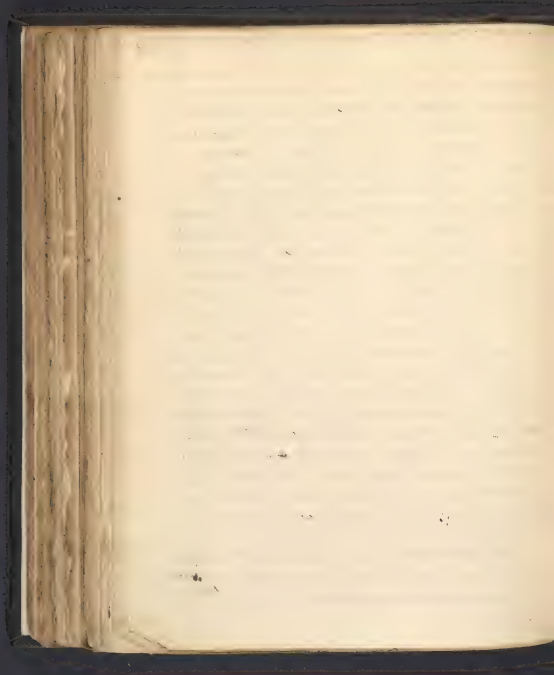
The inspiration of the aqueous vapour  
which is exhaled from the bath, may  
act too as an emollient and efficacious  
dissolvent of the viscous matter in the trachea.

Mr. Albert places great reliance, on the  
use of emollient fumigations. - So thoroughly  
convinced was he of its utility, that he con-  
structed a machine to facilitate its ap-  
plication to the seat of the disease. -

In protracted cases Calomel pu-  
ges have been used with advantage. -

There is another class of medicines  
strongly recommended. - At the head of  
these may be ranked the antispasmodics  
such as opoponax - Sulphuric ether - ol.  
succini, and aqua ammonia. - When the  
patient is weak and delicate, or there is  
a disposition in the disease to assume a  
typhoid form, these remedies may be  
used with great success. -

Diaphoretics and expectorants may  
be sometimes exhibited as useful auxiliaries.



Sulphur - Potome mineral, and the different preparations of squills are commonly used for this purpose.

After the violent symptoms have subsided, a few drops of Laudanum, may have a salutary effect. - Garlic or onion tea sweetened with honey, may be used as a common drink.

An anonymous french writer speaks in extravagant terms of the utility of the licor of Sulphur, in Cynanche tracheale. To a child of three years, he gives from six to ten grains in the morning, and a similar quantity in the evening. He directs that the practitioners should only use that which has been recently made, and which has been preserved in a corked phial. I have never had an opportunity of testing the efficacy of this remedy, still from the confidence with which it is recommended, I think it worthy at least of a trial.

Before closing my imperfect essay, I cannot refrain from tendering my heartfelt thanks to the distinguished professors of this University, for the signal advantages

*[Faint, illegible handwriting on lined paper]*





which I have derived from them in their  
several branches. — That their future lives  
may be as prosperous and happy as their  
past has been useful is the sincere wish  
of them

Obliged Servt.  
The Author

